



SOUTHERN NEVADA WATER AUTHORITY

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June 22, 2016

Dan Pastor
Project Manager
Tetra Tech
1489 W. Warm Springs Road, Suite 100
Henderson, Nevada 89014

Subject: Information Request Related to the Proposed Sunrise Mountain and Historic Lateral Weir Construction

Dear Mr. Pastor,

In response to your June 9, 2016, letter regarding information related to the proposed Sunrise Mountain and Historic Lateral Weir Construction, the Southern Nevada Water Authority (SNWA) is pleased to continue partnering with the Nevada Environmental Response Trust (NERT), for the purposes of mitigating perchlorate-laden groundwater during the proposed construction. Much of the requested information was provided at a meeting attended by members of NERT and SNWA on Thursday, June 16, 2016 at the SNWA offices in Las Vegas, NV or had previously been provided.

In addition, a response to the requested information contained in your letter are presented below with reference to your original request in *italic* text:

1. A map and GIS coordinates for Specific anticipated dewatering locations associated with the Sunrise Mountain and Historic Lateral Weir construction projects.
 - *SNWA indicated at the June 16, 2016 meeting that the contractor would be required to convey the dewatering water to the edge of the construction easement with a minimum of 10 feet of head. SNWA has yet to determine the exact location to terminate dewatering piping, but it will likely be as close to the toe of the weir shoot as possible. SNWA will also include a valved outlet in the dewatering piping to divert flows from NERT's treatment operations should NERT not be able to receive the generated flows.*
2. A description of where work is planned to occur – specifically if any work will be conducted on Bureau of Reclamation land, or if all work areas will be constrained to Clark County land.
 - *As indicated in the meeting, both weir sites are bisected by Clark County and Bureau of Reclamation Land.*
3. All information known by the SNWA regarding hydrologic modeling in the vicinity of the Sunrise Mountain and Historic Lateral weirs that would constrain the predicted dewatering rates for each of these weir construction projects.
 - *SNWA has no hydrologic modeling in this vicinity. Historic dewatering data is available and has previously been provided to NERT.*

SNWA MEMBER AGENCIES

Big Bend Water District • Boulder City • Clark County Water Reclamation District • City of Henderson • City of Las Vegas • City of North Las Vegas • Las Vegas Valley Water District

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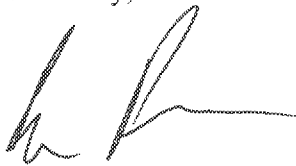
4. Estimated schedule of bidding and construction of Sunrise Mountain and Historic Lateral weirs.
 - *The dates provided below could all be extended by 3-6 months if the projects receive funding from the Bureau of Land Management via the Southern Nevada Public Lands Management Act. The exact length of the extension will depend on the BLM schedule for issuing the funding.*
 - *Advertise for construction bids: early-Nov. 2016*
 - *Open bids: mid-Dec. 2016*
 - *Award contract: mid-Jan. 2017*
 - *Construction complete: June-July 2019*
5. Historical data for previously constructed weirs and information associated with the proposed construction of Sunrise Mountain and Historic Lateral weirs including but not limited to:
 - a. All available groundwater quality information, particularly for the following constituents (please also note if the requested constituents listed have not been analyzed):
 - i. Perchlorate
 - ii. Chlorate
 - iii. Chloride
 - iv. Ammonia
 - v. Sodium
 - vi. Calcium
 - vii. Magnesium
 - viii. Nitrate
 - ix. Sulfate
 - x. Selenium
 - xi. Phosphorous
 - xii. Chromium
 - xiii. Total Dissolved Solids
 - xiv. Chemical Oxygen Demand
 - xv. Biochemical Oxygen Demand
 - *SNWA provided the requested data in April 2016.*
 - *The following constituents from the list above have not been analyzed: Chlorate, Ammonia, Chemical Oxygen Demand, and Biochemical Oxygen Demand.*
 - b. Perchlorate loading to Las Vegas Wash;
 - *SNWA provided the requested data in January 2016.*
 - c. Previous weir construction permits (e.g., National Pollutant Discharge Elimination System construction dewatering permits, including all analytical and field parameter data requirements) and copies of reports and submittals made under these permits;
 - *Permit requirements and the requested permit information was discussed at the June 16, 2016 meeting. Permitting requirements have changed and the National Pollutant Discharge Elimination System construction dewatering permit is no longer required and there is no longer a regulation limiting the*

- pumping rate. It was agreed that SNWA providing a copy of the permitting specification section for construction of Sunrise Mountain and Historic Lateral Weirs would best meet the intent of the request. SNWA also provided a list of permitting contacts for NERT's use in obtaining any required permits.*
- d. Narrative description of weir construction and dewatering process and sequencing;
 - *SNWA presented this information at the June 16, 2016 meeting and has forwarded a copy of the presentation to NERT via email.*
 - e. Dewatering methods and details of the planned systems;
 - *SNWA discussed typical dewatering methods at the June 16, 2016 meeting, but exact dewatering methods are up to the awarded contractor's means and methods. Typical methods have consisted of excavating sumps at the low end of the excavation. Well systems have also been used, but, typically, not with the same effectiveness as sumps.*
 - f. Typical or as-built design of weirs;
 - *A typical weir section was provided in the presentation and construction drawings were provided to NERT at the June 16, 2016 meeting.*
 - g. Groundwater extraction (pumping) rates, including:
 - i. minimum, average, and peak flows extraction rates;
 - ii. factors that drive pumping rates; and
 - iii. information on how pumping rates have been controlled in the past
 - *This information was previously provided to NERT in January 2016.*
 - h. Duration of groundwater extraction activities.
 - *This information was previously provided to NERT in January 2016.*
6. Conceptual dewatering plans including anticipated site-specific dewatering rates and dewatering schedules for construction of the Sunrise Mountain and Historic Lateral weirs, including data used for development of proposed dewatering rates and perchlorate mass discharge calculations.
 - *SNWA previously provided NDEP/NERT with a copy of the dewatering specification for the construction of Sunrise Mountain and Historic Lateral weirs. Combined pumping rates will be limited to 6,900 gpm maximum. Although the max pumping rate of 6,900 gpm is not a permit constraint, it corresponds to the max rate used for previous weir construction. Historic pumping and perchlorate loading data were previously provided. The estimated schedule for dewatering is 2-8 months per weir based on historic pumping data, depending on Contractors' construction methods.*
 7. GIS compatible property ownership information and SNWA access agreements for land within a 2,500-ft radius of proposed weir construction locations and within a 2,500-ft buffer of the Las Vegas Wash along both the north and south banks between the proposed Sunrise Mountain and Historic Lateral weirs. If SNWA does not have land access and ownership information fully encompassing the 2,500-ft buffer areas, please provide the land access and ownership information that SNWA does have in the vicinity and between the proposed Sunrise Mountain and Historic Lateral weirs.
 - *SNWA previously provided CAD drawings of Staging Areas and Temporary Construction Easements with land ownership attached. That is the extent of the ownership information that SNWA has in the area.*

8. Access agreements for NERT contractors to sample wells within 1,500-ft of the Las Vegas Wash in the vicinity of and between the Sunrise Mountain and Historic Lateral weirs, including, but not limited to, wells WMW6.55S, WMW6.15S, and WMW5.58S, coordinated through SNWA's existing access agreements with Bureau of Reclamation and Clark County.
 - *SNWA will cooperate with NERT to provide access to the wells themselves (unlock them for sampling) and will advise Clark County and the Bureau of Reclamation of our cooperation with NERT on sampling activities. Any authorization from Clark County or the Bureau of Reclamation required for NERT to physically access the wells will have to be applied for and obtained by NERT from those agencies.*
9. Any Environmental Assessment or Environmental Impact Statement previously conducted by SNWA related to the weir construction project, in particular any documents specific to endangered species, wetlands, and impacts mitigation measures.
 - *SNWA previously provided a copy U.S. FISH AND WILDLIFE SERVICE BIOLOGICAL OPINION 84320-2009-F-0165, which covers weir construction and associated activities within the Clark County Wetlands Park.*

If any additional technical information is required, please contact Zach Hills (702-875-7033) or myself (702-875-7064) with any requests.

Sincerely,



Ryan Pearson
Senior Civil Engineer
Southern Nevada Water Authority

CC: John Entsminger – SNWA
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Tanya O'Neil – Foley & Lardner LLP
Steve Clough – Nevada Environmental Response Trust
Andrew Steinberg – Nevada Environmental Response Trust
Derek Amidon – Tetra Tech